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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,354	11/30/2000	Pirmin Gerhard Muffler	VO-508	3361

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EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 01/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,354

Applicant(s)

MUFLER, PIRMIN GERHARD

Examiner

Jessica L. Rossi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/19/02, Amd. B, paper no. 9.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 11/19/02. Claims 1 and 4 were canceled. Claims 2-3 and 5-12 are pending.
2. It is noted that the previous office action indicated claim 4 as allowable and Applicants amended accordingly. However, the examiner found art to reject the claim upon further searching.

Claim Objections

3. Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 11, which depends on claim 5, has the same limitations as claim 7, since claim 11 is a combination restating the limitations in claims 6-7 and claim 7 depends on claim 6, which depends on claim 5.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claim 11, it is unclear as to how this claim further limits claim 5 since it is identical to claim 7. Applicants are asked to clarify. It is suggested to delete claim 11.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2-3 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in the specification of the present application in view of the collective teachings of Herklotz (US 6484383) and Marks et al. (US 3322598).

It is noted that the present invention is directed to eliminating air pockets between a flexible substrate and a protective layer, which is placed on a carrier (support), during lamination of these layers. Elimination of the air pockets takes place by laying the substrate over the entire area of the protective layer from a first contact point towards an edge of the substrate (bottom of p. 3 – top of p. 4).

With respect to claim 10, the Admitted Prior Art teaches it is known to apply a thin-walled flat, flexible substrate to an assembly carrier, which has a protective layer thereon (See MPEP 2129). The Admitted Prior Art also acknowledges that the presence of the protective layer between the substrate and carrier results in the occurrence of air pockets between the substrate and protective layer during lamination (p. 3, 1st paragraph). However, the Admitted Prior Art is silent as to arranging the substrate at a spacing and curved in a convex manner, laminating the substrate over the protective layer from a contact point towards an edge of the substrate, and the substrate being arched and detached from a carrying body by controlling a pressure of a medium in a cavity between the substrate and the carrying body.

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It is known in a variety of arts to eliminate air pockets during lamination of a flexible substrate to a layer, which is placed on a support, by arranging the substrate at a spacing and curved in a convex manner, contacting the layer with the substrate, and laying the substrate over the layer from a contact point towards an edge of the substrate where the substrate is arched and detached from a carrying body by controlling a pressure of a medium in a cavity between the substrate and the carrying body, as taught by the collective teachings of Herklotz (Figures 1A-1D; column 2, lines 6-16; column 3, lines 35-42 and 51-58; column 4, lines 15-16) and Marks et al. (Figures 4-5; column 1, lines 8-9; column 2, lines 22-24 and 48-51 and 57-61 and 69-71; column 3, lines 11-22 and 46-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate the flexible substrate to the protective layer of the Admitted Prior Art by arranging the substrate at a spacing and curved in a convex manner, contacting the protective layer with the substrate, and laying the substrate over the protective layer from a contact point towards an edge of the substrate where the substrate is arched and detached from a carrying body by controlling a pressure of a medium in a cavity between the substrate and the carrying body because such a lamination technique is known, as taught by the collective teachings of Herklotz and Marks et al., and this would prevent air bubble formation during lamination of the substrate and protective layer.

Regarding claim 2, Herklotz and Marks teach the substrate applying a constant pressure on the layer.

Regarding claims 3 and 9, Herklotz (column 3, lines 56-58) and Marks (column 2, lines 57-59) teach the pressure medium being applied to a side of the substrate remote from the layer.

Regarding claim 5, Herklotz (Figures 1A-1D; column 3, lines 45-47) and Marks (Figure 4; column 2, lines 57-61) teach the carrying body moveable relative to the layer where a portion facing the layer carries the substrate and has a plurality of flow apertures for accommodating the pressure medium.

Regarding claim 6, Herklotz (Figure 1A) and Marks (Figure 4) teach the portion being planar. Marks teaches the flow apertures being ducts (column 2, lines 57-58) but is silent as to circumferential grooves. Herklotz teaches connections for supplying and removing the medium to the cavity (column 3, lines 46-47) but is silent as to the connections being centrally formed ducts and circumferential grooves. Selection of particular connections for supplying and removing the medium from the cavity would have been within purview of the skilled artisan absent any unexpected results.

Regarding claims 7 and 11, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure some of the connections as overpressure lines and others as negative pressure lines since both Herklotz and Marks teach supplying and removing the medium from the cavity.

Regarding claims 8 and 12, selection of a particular cross-section for the portion would have been within purview of the skilled artisan at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi
Patent Examiner
Art Unit 1733



jl
December 28, 2002


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AJ 1733 12-30-02